PATENT SPECIFICATION

405,261

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(Patent of Addition to No. 380,582: dated Nov. 8, 1930.)

Complete Accepted: Jan. 30, 1934.

COMPLETE SPECIFICATION.

Spring Base or Insertion for Mattresses, Cushions, Upholstered Furniture or the like.

We, SCHLARAFFIA-WERKE HÜSER & Co. GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, of Kreuzstrasse 29/31, Wuppertal-Barmen, Germany, a German Company, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The invention relates to a spring base or insertion for mattresses, cushions, upholstered furniture or the like according to Patent 380,582 consisting of a number of helical springs which are wound at their ends into the form of cones and are connected together by means of eyes formed by interlacing the spring coils situated outside the end spirals.

In the case of the spring insertions according to the main patent specification the eyes are hooked into one another after the manner of puzzle loops. Such a connection is indeed extremely flexible and reliable, but nevertheless always requires comparatively great skill.

Now according to the invention of addition the connection of the eyes is to be effected in a manner well known per se with the aid of separate members, hollow rivets particularly, which however have such dimensions that they allow the eyes of the individual springs to have play in the radial and axial direction. This can be particularly easily achieved with the aid of the well known two-part hollow rivets, which consist of a matrix part and a patrix part and in the case of which the connection is effected by the free shank end of the patrix part being connected by means of a flange by pressing together both parts in the head of the matrix part.

In this manner the individual springs can be quickly and easily connected together in a manner which is secure and which sufficiently permits movement in all directions without the places of connection coming directly into contact with the cover.

[*Price* 1/-]

One constructional example of the subject-matter of the invention is represented in the drawings:

Fig. 1 showing a spring base partly in section and partly in elevation,

Fig. 2 two interconnected springs of the base in elevation and to a larger scale,

Figs. 3 and 4 in plan the upper and lower connecting places of the two springs according to Fig. 2, and

Fig. 5 a vertical section through a connecting place to a larger scale.

The spring case represented in Fig. 1 consists of a comparatively large number of helical springs (*d*, *f*, *g*) which are arranged vertically and are connected with one another and which are arranged between two frames *a* and are surrounded by upholstery *b*. The individual helical springs consist of a cylindrical middle portion *f* having coils of a large pitch and of two shorter conical end portions *d*, *g* having coils of a small pitch, the middle portions of neighbouring springs being inter-coiled throughout their whole length and so forming a coherent wire fabric. The end coils of the conical portions *d*, *g* are so wound that they form a closed circle and that their free ends are situated under the starting point of the end coil.

The upper and lower end coils of the middle portion *f* of the helical springs are provided at their parts situated nearest to the neighbouring springs with eyes *h* which either, as shown in the upper part of Fig. 2 and in Fig. 3, may be directed outwards, or as shown in the lower part of Fig. 2 and in Fig. 4 may be directed inwards, and which are formed by interlacing the spring wire itself. These eyes *h* serve for connecting the individual springs to one another, this being effected with the aid of hollow rivets *i*, *k* engaging through the eyes. The hollow rivets used in the example represented consist of two parts, namely, of a matrix part *i* and of a patrix part *k* engag-

ing therein, the free shank-end of which is broadened to a flange *m* by pressing together the two rivet-halves in the head of the matrix portion, which flange prevents the two parts from coming undone. Moreover, as is evident in particular from Fig. 5, the rivets are so long and thin that between the interconnected eyes and between them and the rivet shank a certain clearance exists in order that the joints may be capable of articulation not only in a direction transverse to the rivet but within certain limits capable of articulation also in the longitudinal direction of the rivet, which is of great importance for the flexibility of the spring insertion.

Of course the invention is not limited to the example represented, on the contrary other constructions also are possible. Thus instead of two-part hollow rivets simple rivets or screws may also be employed. Also the connecting eyes might be arranged on coils of the springs other than the end coils.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. Spring base or insertion for mattresses, cushions and the like according to Patent 380,582 consisting of a number of helical springs wound at their ends into the form of cones, which springs are connected together in pairs by means of eyes formed by interlacing the spring coils situated below the end spirals, characterised by the connection of the eyes (*h*) being effected with the aid of separate members (*i*, *k*) (screws, rivets or the like) passed through them, said members having a shank so long and thin that the connecting eyes are movable on the shaft in all directions.

2. Spring base according to claim 1, characterised by the connection being effected by well-known hollow rivets consisting of two halves (*i*, *k*) capable of being pressed into one another.

3. Spring base or insertion for mattresses, cushions and the like substantially as described with reference to the accompanying drawings.

Dated this 29th day of July, 1932.

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Fig. 1

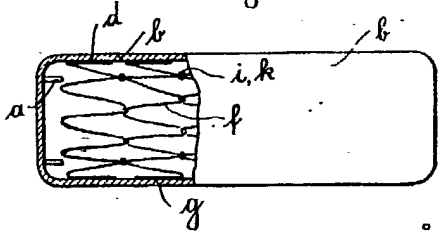


Fig. 5

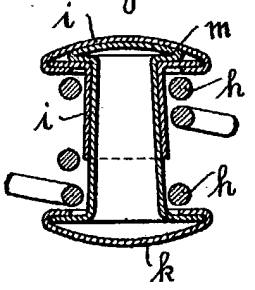


Fig. 2

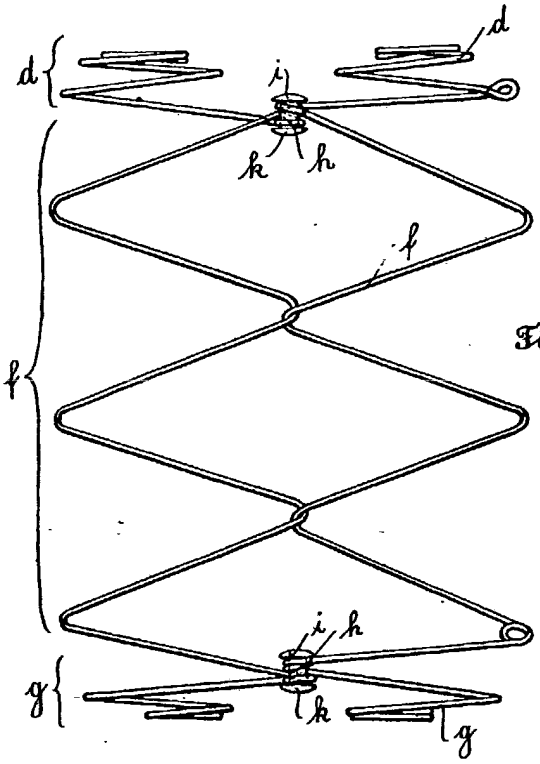


Fig. 3

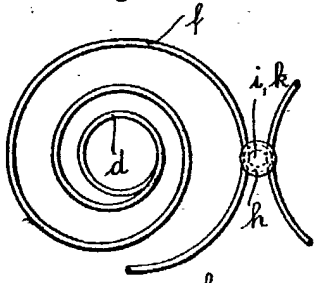
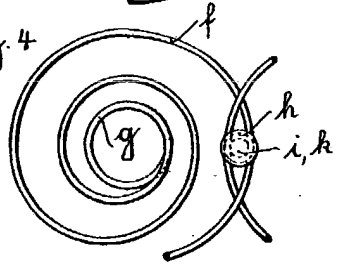


Fig. 4



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